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Anti-SLC1A4 Antibody

Catalog # ABO11496

Product Information

Application	WB, IHC-P
Primary Accession	P43007
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Neutral amino acid transporter A(SLC1A4) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	6509
Other Names	Neutral amino acid transporter A, Alanine/serine/cysteine/threonine transporter 1, ASCT-1, SATT, Solute carrier family 1 member 4, SLC1A4, ASCT1, SATT
Calculated MW	55723
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Membrane ; Multi-pass membrane protein . Melanosome . Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Tissue Specificity	Expressed mostly in brain, muscle, and pancreas but detected in all tissues examined.
Source	Eukaryota
Protein Name	Neutral amino acid transporter A
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human SLC1A4(495-512aa EAIPNCKSEEETSPLVTH), different from the related rat and mouse sequences by one amino acid.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

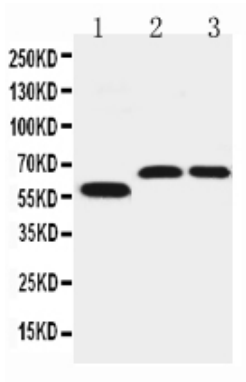
Protein Information

Name	SLC1A4 {ECO:0000303|PubMed:7896285, ECO:0000312|HGNC:HGNC:10942}
Function	Sodium-coupled antiporter of neutral amino acids. In a tri- substrate transport cycle, exchanges neutral amino acids between the extracellular and intracellular compartments, coupled to the inward cotransport of at least one sodium ion (PubMed:24808181, PubMed:27272177, PubMed:34630942, PubMed:8910405). Exchanges neutral amino acids such as L- and D-serine, L-threonine, L-asparagine and L- alanine in a bidirectional way (PubMed:14502423, PubMed:26041762, PubMed:27272177, PubMed:34630942, PubMed:8101838, PubMed:8340364, PubMed:8910405). Involved in homeostasis of D-serine, a coagonist of synaptic NMDA receptors. In astrocytes at excitatory synapses, mediates electrogenic D-serine influx coupled to L-serine efflux and L-serine shuttling to neurons for de novo D-serine synthesis (By similarity). Displays sodium- and amino acid-dependent but uncoupled channel-like anion conductance with a preference SCN(-) > NO3(-) > I(-) > Cl(-) (PubMed:8910405).
Cellular Location	Cell membrane; Multi-pass membrane protein. Melanosome membrane; Multi-pass membrane protein. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV.
Tissue Location	Expressed mostly in brain, muscle, and pancreas but detected in all tissues examined.

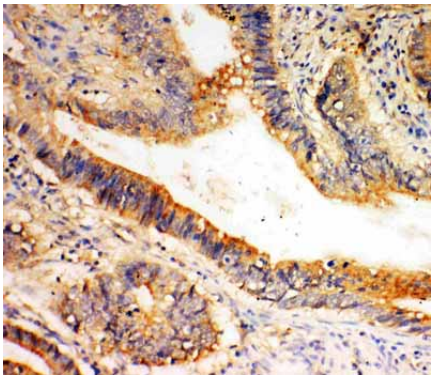
Background

Neutral amino acid transporter A, also called SLC1A4 or ASCT1, is a protein that in humans is encodes by the SLC1A4 gene. The SLC1A4 gene is mapped to chromosome 2p14 based on an alignment of the SLC1A4 sequence with the genomic sequence(GRCh37). ASCT1 does not transport glutamate or aspartate but alanine, serine, cysteine, and threonine instead. It is found that the ASCT1 transporter functions primarily as an amino acid exchanger. Transport is associated with a chloride channel activity that is thermodynamically uncoupled from animo acid transport. This gene also exhibits sodium dependence.

Images



Anti-SLC1A4 antibody, ABO11496, Western blottingLane 1: U87 Cell LysateLane 2: Rat Brain Tissue LysateLane 3: Mouse Brain Tissue Lysate



Anti-SLC1A4 antibody, ABO11496, IHC(P)IHC(P): Human Intestinal Cancer Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.